Московский Авиационный Институт

(Национальный Исследовательский Университет)

Институт №8 “Компьютерные науки и прикладная математика”

Кафедра №806 “Вычислительная математика и программирование”

**Лабораторная работа №8 по курсу**

**«Операционные системы»**

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**Постановка задачи**

Приобретение практических навыков диагностики работы программного обеспечения.

При выполнении лабораторных работ по курсу ОС необходимо продемонстрировать ключевые системные вызовы, которые в них используются и то, что их использование соответствует варианту ЛР. По итогам выполнения всех лабораторных работ отчет по данной ЛР должен содержать краткую сводку по исследованию написанных программ.

**Общий метод и алгоритм решения**

Команда **strace** показывает все системные вызовы программы, которые та отправляет к системе во время выполнения, а также их параметры и результат выполнения. Но при необходимости можно подключиться и к уже запущенному процессу. Перед тем, как перейти к практике, разберем опции утилиты и ее синтаксис:

**$ strace опции команда аргументы**

В самом простом варианте **strace** запускает переданную команду с её аргументами и выводит в стандартный поток ошибок все системные вызовы команды. Давайте разберём опции утилиты, с помощью которых можно управлять её поведением:

● **-i** - выводить указатель на инструкцию во время выполнения системного вызова;

● **-k** - выводить стек вызовов для отслеживаемого процесса после каждого системного вызова;

● **-o** - выводить всю информацию о системных вызовах не в стандартный поток ошибок, а в файл;

● **-q** - не выводить сообщения о подключении о отключении от процесса;

● **-qq** - не выводить сообщения о завершении работы процесса;

● **-r** - выводить временную метку для каждого системного вызова;

● **-s** - указать максимальный размер выводимой строки, по умолчанию 32;

● **-t** - выводить время суток для каждого вызова;

● **-tt** - добавить микросекунды;

● **-ttt** - добавить микросекунды и количество секунд после начала эпохи Unix;

● **-T** - выводить длительность выполнения системного вызова;

● **-x** - выводить все не ASCI-строки в шестнадцатеричном виде;

● **-xx** - выводить все строки в шестнадцатеричном виде;

● **-y** - выводить пути для файловых дескрипторов;

● **-yy** - выводить информацию о протоколе для файловых дескрипторов;

● **-c** - подсчитывать количество ошибок, вызовов и время выполнения для каждого системного вызова;

● **-O** - добавить определённое количество микросекунд к счетчику времени для каждого вызова;

● **-S** - сортировать информацию выводимую при опции -c. Доступны поля time, calls, name и nothing. По умолчанию используется time;

● **-w** - суммировать время между началом и завершением системного вызова;

● **-e** - позволяет отфильтровать только нужные системные вызовы или события;

● **-P** - отслеживать только системные вызовы, которые касаются указанного пути;

● **-v** - позволяет выводить дополнительную информацию, такую как версии окружения, статистику и так далее;

● **-b** - если указанный системный вызов обнаружен, трассировка прекращается;

● **-f** - отслеживать также дочерние процессы, если они будут созданы;

● **-ff** - если задана опция -o, то для каждого дочернего процесса будет создан отдельный файл с именем имя\_файла.pid.

● **-I** - позволяет блокировать реакцию на нажатия Ctrl+C и Ctrl+Z;

● **-E** - добавляет переменную окружения для запускаемой программы;

● **-p** - указывает pid процесса, к которому следует подключиться;

● **-u** - запустить программу, от имени указанного пользователя.

**Strace**

**ЛР-1:**

execve("./main", ["./main"], 0x7ffcd66b0d18 /\* 36 vars \*/) = 0

brk(NULL) = 0x565070f07000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe5544dce0) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7f4d8f6b4000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19095, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19095, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f4d8f6af000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0 =\340\2563\265?\356\25x\261\27\313A#\350"..., 68,

896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f4d8f487000

mmap(0x7f4d8f4af000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f4d8f4af000

mmap(0x7f4d8f644000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f4d8f644000

mmap(0x7f4d8f69c000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f4d8f69c000

mmap(0x7f4d8f6a2000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f4d8f6a2000

close(3) = 0

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7f4d8f484000

arch\_prctl(ARCH\_SET\_FS, 0x7f4d8f484740) = 0

set\_tid\_address(0x7f4d8f484a10) = 140089

set\_robust\_list(0x7f4d8f484a20, 24) = 0

rseq(0x7f4d8f4850e0, 0x20, 0, 0x53053053) = 0

mprotect(0x7f4d8f69c000, 16384, PROT\_READ) = 0

mprotect(0x565070598000, 4096, PROT\_READ) = 0

mprotect(0x7f4d8f6ee000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) =

0

munmap(0x7f4d8f6af000, 19095) = 0

write(1, "Enter the first filename with fi"..., 68Enter the first filename with file extension(.txt or

.doc or .rtf): ) = 68

getrandom("\x44\x70\x10\xe5\xe0\x87\x34\x53", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x565070f07000

brk(0x565070f28000) = 0x565070f28000

read(0, 1.txt

"1", 1) = 1

read(0, ".", 1) = 1

read(0, "t", 1) = 1

read(0, "x", 1) = 1

read(0, "t", 1) = 1

read(0, "\n", 1) = 1

openat(AT\_FDCWD, "1.txt", O\_WRONLY|O\_CREAT|O\_TRUNC, 0200) = 3

**pipe2([4, 5], 0) = 0**

**pipe2([6, 7], 0) = 0**

**clone(child\_stack=NULL,**

**flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLDstrace: Process**

**140161 attached, child\_tidptr=0x7f4d8f484a10) = 140161**

[pid 140161] set\_robust\_list(0x7f4d8f484a20, 24 <unfinished ...>

[pid 140089] write(1, "Enter the second filename with f"..., 69 <unfinished ...>

Enter the second filename with file extension(.txt or .doc or .rtf): [pid 140161] <... set\_robust\_list

resumed>) = 0

[pid 140089] <... write resumed>) = 69

[pid 140161] close(5 <unfinished ...>

[pid 140089] read(0, <unfinished ...>

[pid 140161] <... close resumed>) = 0

[pid 140161] close(6) = 0

[pid 140161] close(7) = 0

**[pid 140161] dup2(4, 0) = 0**

**[pid 140161] dup2(3, 1) = 1**

**[pid 140161] dup2(3, 2) = 2**

**[pid 140161] execve("./child\_1", ["./child\_1"], 0x7ffe5544deb8 /\* 36 vars \*/) = 0**

[pid 140161] brk(NULL) = 0x560f7ab33000

[pid 140161] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe950d9cc0) = -1 EINVAL (Invalid

argument)

[pid 140161] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f4b38a42000

[pid 140161] access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

[pid 140161] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 5

[pid 140161] newfstatat(5, "", {st\_mode=S\_IFREG|0644, st\_size=19095, ...}, AT\_EMPTY\_PATH)

= 0

[pid 140161] mmap(NULL, 19095, PROT\_READ, MAP\_PRIVATE, 5, 0) = 0x7f4b38a3d000

[pid 140161] close(5) = 0

[pid 140161] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC)

= 5

[pid 140161] read(5, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) =

832

[pid 140161] pread64(5, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784,

64) = 784

[pid 140161] pread64(5, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48,

848) = 48

[pid 140161] pread64(5, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0

=\340\2563\265?\356\25x\261\27\313A#\350"..., 68, 896) = 68

[pid 140161] newfstatat(5, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...},

AT\_EMPTY\_PATH) = 0

[pid 140161] pread64(5, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784,

64) = 784

[pid 140161] mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 5, 0)

= 0x7f4b38815000

[pid 140161] mmap(0x7f4b3883d000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 5, 0x28000) = 0x7f4b3883d000

[pid 140161] mmap(0x7f4b389d2000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 5, 0x1bd000) = 0x7f4b389d2000

[pid 140161] mmap(0x7f4b38a2a000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 5, 0x214000) = 0x7f4b38a2a000

[pid 140161] mmap(0x7f4b38a30000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f4b38a30000

[pid 140161] close(5) = 0

[pid 140161] mmap(NULL, 12288, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f4b38812000

[pid 140161] arch\_prctl(ARCH\_SET\_FS, 0x7f4b38812740) = 0

[pid 140161] set\_tid\_address(0x7f4b38812a10) = 140161

[pid 140161] set\_robust\_list(0x7f4b38812a20, 24) = 0

[pid 140161] rseq(0x7f4b388130e0, 0x20, 0, 0x53053053) = 0

[pid 140161] mprotect(0x7f4b38a2a000, 16384, PROT\_READ) = 0

[pid 140161] mprotect(0x560f79ce4000, 4096, PROT\_READ) = 0

[pid 140161] mprotect(0x7f4b38a7c000, 8192, PROT\_READ) = 0

[pid 140161] prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024,

rlim\_max=RLIM64\_INFINITY}) = 0

[pid 140161] munmap(0x7f4b38a3d000, 19095) = 0

[pid 140161] getrandom("\x97\x0b\x4c\xf9\x96\xa6\x4a\x3d", 8, GRND\_NONBLOCK) = 8

[pid 140161] brk(NULL) = 0x560f7ab33000

[pid 140161] brk(0x560f7ab54000) = 0x560f7ab54000

[pid 140161] read(0, 2.txt

<unfinished ...>

[pid 140089] <... read resumed>"2", 1) = 1

[pid 140089] read(0, ".", 1) = 1

[pid 140089] read(0, "t", 1) = 1

[pid 140089] read(0, "x", 1) = 1

[pid 140089] read(0, "t", 1) = 1

[pid 140089] read(0, "\n", 1) = 1

[pid 140089] openat(AT\_FDCWD, "2.txt", O\_WRONLY|O\_CREAT|O\_TRUNC, 0200) = 8

**[pid 140089] clone(child\_stack=NULL,**

**flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLDstrace: Process**

**140168 attached, child\_tidptr=0x7f4d8f484a10) = 140168**

[pid 140168] set\_robust\_list(0x7f4d8f484a20, 24 <unfinished ...>

[pid 140089] close(4 <unfinished ...>

[pid 140168] <... set\_robust\_list resumed>) = 0

[pid 140168] close(3 <unfinished ...>

[pid 140089] <... close resumed>) = 0

[pid 140168] <... close resumed>) = 0

[pid 140089] close(6 <unfinished ...>

[pid 140168] close(4 <unfinished ...>

[pid 140089] <... close resumed>) = 0

[pid 140089] write(1, "Enter something you want: \0", 27 <unfinished ...>

Enter something you want: [pid 140168] <... close resumed>) = 0

[pid 140089] <... write resumed>) = 27

[pid 140168] close(5 <unfinished ...>

[pid 140089] read(0, <unfinished ...>

[pid 140168] <... close resumed>) = 0

[pid 140168] close(7) = 0

**[pid 140168] dup2(6, 0) = 0**

**[pid 140168] dup2(8, 1) = 1**

**[pid 140168] dup2(8, 2) = 2**

**[pid 140168] execve("./child\_2", ["./child\_2"], 0x7ffe5544deb8 /\* 36 vars \*/) = 0**

[pid 140168] brk(NULL) = 0x55a635099000

[pid 140168] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffedb295600) = -1 EINVAL (Invalid

argument)

[pid 140168] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f96c3193000

[pid 140168] access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

[pid 140168] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

[pid 140168] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19095, ...}, AT\_EMPTY\_PATH)

= 0

[pid 140168] mmap(NULL, 19095, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f96c318e000

[pid 140168] close(3) = 0

[pid 140168] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC)

= 3

[pid 140168] read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) =

832

[pid 140168] pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784,

64) = 784

[pid 140168] pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48,

848) = 48

[pid 140168] pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0

=\340\2563\265?\356\25x\261\27\313A#\350"..., 68, 896) = 68

[pid 140168] newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...},

AT\_EMPTY\_PATH) = 0

[pid 140168] pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784,

64) = 784

[pid 140168] mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0)

= 0x7f96c2f66000

[pid 140168] mmap(0x7f96c2f8e000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f96c2f8e000

[pid 140168] mmap(0x7f96c3123000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f96c3123000

[pid 140168] mmap(0x7f96c317b000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7f96c317b000

[pid 140168] mmap(0x7f96c3181000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f96c3181000

[pid 140168] close(3) = 0

[pid 140168] mmap(NULL, 12288, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f96c2f63000

[pid 140168] arch\_prctl(ARCH\_SET\_FS, 0x7f96c2f63740) = 0

[pid 140168] set\_tid\_address(0x7f96c2f63a10) = 140168

[pid 140168] set\_robust\_list(0x7f96c2f63a20, 24) = 0

[pid 140168] rseq(0x7f96c2f640e0, 0x20, 0, 0x53053053) = 0

[pid 140168] mprotect(0x7f96c317b000, 16384, PROT\_READ) = 0

[pid 140168] mprotect(0x55a6340f4000, 4096, PROT\_READ) = 0

[pid 140168] mprotect(0x7f96c31cd000, 8192, PROT\_READ) = 0

[pid 140168] prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024,

rlim\_max=RLIM64\_INFINITY}) = 0

[pid 140168] munmap(0x7f96c318e000, 19095) = 0

[pid 140168] getrandom("\xa2\x06\xa6\xa9\x90\xdc\x2d\xb8", 8, GRND\_NONBLOCK) = 8

[pid 140168] brk(NULL) = 0x55a635099000

[pid 140168] brk(0x55a6350ba000) = 0x55a6350ba000

[pid 140168] read(0, one

<unfinished ...>

[pid 140089] <... read resumed>"o", 1) = 1

[pid 140089] read(0, "n", 1) = 1

[pid 140089] read(0, "e", 1) = 1

[pid 140089] read(0, "\n", 1) = 1

[pid 140089] write(5, "one\n", 4) = 4

[pid 140161] <... read resumed>"o", 1) = 1

[pid 140089] write(7, "-\0", 2) = 2

[pid 140168] <... read resumed>"-", 1) = 1

[pid 140161] read(0, <unfinished ...>

[pid 140089] read(0, <unfinished ...>

[pid 140168] read(0, <unfinished ...>

[pid 140161] <... read resumed>"n", 1) = 1

[pid 140168] <... read resumed>"\0", 1) = 1

[pid 140161] read(0, <unfinished ...>

[pid 140168] read(0, <unfinished ...>

[pid 140161] <... read resumed>"e", 1) = 1

[pid 140161] read(0, "\n", 1) = 1

[pid 140161] write(1, "eno", 3) = 3

[pid 140161] read(0, two

<unfinished ...>

[pid 140089] <... read resumed>"t", 1) = 1

[pid 140089] read(0, "w", 1) = 1

[pid 140089] read(0, "o", 1) = 1

[pid 140089] read(0, "\n", 1) = 1

[pid 140089] write(5, "two\n", 4) = 4

[pid 140161] <... read resumed>"t", 1) = 1

[pid 140089] write(7, "-\0", 2) = 2

[pid 140168] <... read resumed>"-", 1) = 1

[pid 140161] read(0, <unfinished ...>

[pid 140089] read(0, <unfinished ...>

[pid 140161] <... read resumed>"w", 1) = 1

[pid 140168] read(0, <unfinished ...>

[pid 140161] read(0, <unfinished ...>

[pid 140168] <... read resumed>"\0", 1) = 1

[pid 140161] <... read resumed>"o", 1) = 1

[pid 140168] read(0, <unfinished ...>

[pid 140161] read(0, "\n", 1) = 1

[pid 140161] write(1, "owt", 3) = 3

[pid 140161] read(0, three

<unfinished ...>

[pid 140089] <... read resumed>"t", 1) = 1

[pid 140089] read(0, "h", 1) = 1

[pid 140089] read(0, "r", 1) = 1

[pid 140089] read(0, "e", 1) = 1

[pid 140089] read(0, "e", 1) = 1

[pid 140089] read(0, "\n", 1) = 1

[pid 140089] write(5, "three\n", 6) = 6

[pid 140161] <... read resumed>"t", 1) = 1

[pid 140089] write(7, "-\0", 2 <unfinished ...>

[pid 140161] read(0, "h", 1) = 1

[pid 140089] <... write resumed>) = 2

[pid 140168] <... read resumed>"-", 1) = 1

[pid 140089] read(0, <unfinished ...>

[pid 140168] read(0, <unfinished ...>

[pid 140161] read(0, "r", 1) = 1

[pid 140168] <... read resumed>"\0", 1) = 1

[pid 140168] read(0, <unfinished ...>

[pid 140161] read(0, "e", 1) = 1

[pid 140161] read(0, "e", 1) = 1

[pid 140161] read(0, "\n", 1) = 1

[pid 140161] write(1, "eerht", 5) = 5

[pid 140161] read(0, four

<unfinished ...>

[pid 140089] <... read resumed>"f", 1) = 1

[pid 140089] read(0, "o", 1) = 1

[pid 140089] read(0, "u", 1) = 1

[pid 140089] read(0, "r", 1) = 1

[pid 140089] read(0, " ", 1) = 1

[pid 140089] read(0, "\n", 1) = 1

[pid 140089] write(5, "four \n", 6) = 6

[pid 140161] <... read resumed>"f", 1) = 1

[pid 140161] read(0, <unfinished ...>

[pid 140089] write(7, "-\0", 2 <unfinished ...>

[pid 140161] <... read resumed>"o", 1) = 1

[pid 140089] <... write resumed>) = 2

[pid 140168] <... read resumed>"-", 1) = 1

[pid 140089] read(0, <unfinished ...>

[pid 140168] read(0, <unfinished ...>

[pid 140161] read(0, <unfinished ...>

[pid 140168] <... read resumed>"\0", 1) = 1

[pid 140161] <... read resumed>"u", 1) = 1

[pid 140168] read(0, <unfinished ...>

[pid 140161] read(0, "r", 1) = 1

[pid 140161] read(0, " ", 1) = 1

[pid 140161] read(0, "\n", 1) = 1

[pid 140161] write(1, " ruof", 5) = 5

[pid 140161] read(0,

<unfinished ...>

[pid 140089] <... read resumed>"\n", 1) = 1

[pid 140089] close(5) = 0

[pid 140161] <... read resumed>"", 1) = 0

[pid 140089] close(7 <unfinished ...>

[pid 140161] exit\_group(0 <unfinished ...>

[pid 140089] <... close resumed>) = 0

[pid 140168] <... read resumed>"", 1) = 0

[pid 140089] close(3 <unfinished ...>

[pid 140168] exit\_group(0 <unfinished ...>

[pid 140161] <... exit\_group resumed>) = ?

[pid 140089] <... close resumed>) = 0

[pid 140168] <... exit\_group resumed>) = ?

[pid 140089] close(0) = 0

[pid 140089] write(1, "Programm was ended successfully!"..., 34Programm was ended

successfully!

) = 34

**[pid 140168] +++ exited with 0 +++**

[pid 140089] --- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=140168,

si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=0} ---

[pid 140089] exit\_group(0) = ?

**[pid 140161] +++ exited with 0 +++**

+++ exited with 0 +++

**ЛР-2:**

execve("./main", ["./main", "6"], 0x7ffc16adf5b0 /\* 35 vars \*/) = 0

brk(NULL) = 0x55fa69f30000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffeda3f2810) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7fb6bb6e0000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19739, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19739, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fb6bb6db000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3,

"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\302\211\332Pq\2439\235\350\223\322\257\201\326\243\f"..., 68,

896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2220400, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2264656, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7fb6bb4b2000

mprotect(0x7fb6bb4da000, 2023424, PROT\_NONE) = 0

mmap(0x7fb6bb4da000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7fb6bb4da000

mmap(0x7fb6bb66f000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7fb6bb66f000

mmap(0x7fb6bb6c8000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x215000) = 0x7fb6bb6c8000

mmap(0x7fb6bb6ce000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fb6bb6ce000

close(3) = 0

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7fb6bb4af000

arch\_prctl(ARCH\_SET\_FS, 0x7fb6bb4af740) = 0

set\_tid\_address(0x7fb6bb4afa10) = 8451

set\_robust\_list(0x7fb6bb4afa20, 24) = 0

rseq(0x7fb6bb4b00e0, 0x20, 0, 0x53053053) = 0

mprotect(0x7fb6bb6c8000, 16384, PROT\_READ) = 0

mprotect(0x55fa21183000, 4096, PROT\_READ) = 0

mprotect(0x7fb6bb71a000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) =

0

munmap(0x7fb6bb6db000, 19739) = 0

clock\_gettime(CLOCK\_PROCESS\_CPUTIME\_ID, {tv\_sec=1, tv\_nsec=343580500}) = 0

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7fb6bb543870, sa\_mask=[],

sa\_flags=SA\_RESTORER|SA\_ONSTACK|SA\_RESTART|SA\_SIGINFO,

sa\_restorer=0x7fb6bb4f4520}, NULL, 8) = 0

rt\_sigprocmask(SIG\_UNBLOCK, [RTMIN RT\_1], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK,

-1, 0) = 0x7fb6bacae000

mprotect(0x7fb6bacaf000, 8388608, PROT\_READ|PROT\_WRITE) = 0

getrandom("\xc6\x3e\x15\x6a\xde\xea\x91\x14", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x55fa69f30000

brk(0x55fa69f51000) = 0x55fa69f51000

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

**clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THR**

**EAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_**

**CLEARTID, child\_tid=0x7fb6bb4ae910, parent\_tid=0x7fb6bb4ae910, exit\_signal=0,**

**stack=0x7fb6bacae000, stack\_size=0x7fff00, tls=0x7fb6bb4ae640} => {parent\_tid=[8469]},**

**88) = 8469**

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK,

-1, 0) = 0x7fb6ba4ad000

mprotect(0x7fb6ba4ae000, 8388608, PROT\_READ|PROT\_WRITEstrace: Process 8469 attached

) = 0

[pid 8469] rseq(0x7fb6bb4aefe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 8451] rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

[pid 8451]

**clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THR**

**EAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD**

**CLEARTID, child\_tid=0x7fb6bacad910, parent\_tid=0x7fb6bacad910, exit\_signal=0,**

**stack=0x7fb6ba4ad000, stack\_size=0x7fff00, tls=0x7fb6bacad640} <unfinished ...>**

[pid 8469] <... rseq resumed>) = 0

strace: Process 8470 attached

[pid 8469] set\_robust\_list(0x7fb6bb4ae920, 24 <unfinished ...>

[pid 8451] **<... clone3 resumed> => {parent\_tid=[8470]}, 88) = 8470**

[pid 8451] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8470] rseq(0x7fb6bacadfe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 8469] <... set\_robust\_list resumed>) = 0

[pid 8470] <... rseq resumed>) = 0

[pid 8451] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8469] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8451] mmap(NULL, 8392704, PROT\_NONE,

MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 8470] set\_robust\_list(0x7fb6bacad920, 24 <unfinished ...>

[pid 8451] <... mmap resumed>) = 0x7fb6b9cac000

[pid 8469] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] mprotect(0x7fb6b9cad000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 8470] <... set\_robust\_list resumed>) = 0

[pid 8451] <... mprotect resumed>) = 0

[pid 8470] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8451] rt\_sigprocmask(SIG\_BLOCK, ~[], <unfinished ...>

[pid 8470] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] <... rt\_sigprocmask resumed>[], 8) = 0

[pid 8451]

**clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THR**

**EAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_**

**CLEARTID, child\_tid=0x7fb6ba4ac910, parent\_tid=0x7fb6ba4ac910, exit\_signal=0,**

**stack=0x7fb6b9cac000, stack\_size=0x7fff00, tls=0x7fb6ba4ac640}strace: Process 8471**

**attached => {parent\_tid=[8471]}, 88) = 8471**

[pid 8471] rseq(0x7fb6ba4acfe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 8451] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8471] <... rseq resumed>) = 0

[pid 8451] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] mmap(NULL, 8392704, PROT\_NONE,

MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 8471] set\_robust\_list(0x7fb6ba4ac920, 24) = 0

[pid 8451] <... mmap resumed>) = 0x7fb6b94ab000

[pid 8471] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8451] mprotect(0x7fb6b94ac000, 8388608, PROT\_READ|PROT\_WRITE) = 0

[pid 8471] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

[pid 8451]

**clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THR**

**EAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_**

**CLEARTID, child\_tid=0x7fb6b9cab910, parent\_tid=0x7fb6b9cab910, exit\_signal=0,**

**stack=0x7fb6b94ab000, stack\_size=0x7fff00, tls=0x7fb6b9cab640}strace: Process 8472**

**attached => {parent\_tid=[8472]}, 88) = 8472**

[pid 8472] rseq(0x7fb6b9cabfe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 8451] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8472] <... rseq resumed>) = 0

[pid 8451] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8472] set\_robust\_list(0x7fb6b9cab920, 24 <unfinished ...>

[pid 8451] mmap(NULL, 8392704, PROT\_NONE,

MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 8472] <... set\_robust\_list resumed>) = 0

[pid 8451] <... mmap resumed>) = 0x7fb6b8caa000

[pid 8472] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8451] mprotect(0x7fb6b8cab000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 8472] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] <... mprotect resumed>) = 0

[pid 8451] rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

[pid 8451]

**clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THR**

**EAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_**

**CLEAR**

**TID, child\_tid=0x7fb6b94aa910, parent\_tid=0x7fb6b94aa910, exit\_signal=0,**

**stack=0x7fb6b8caa000, stack\_size=0x7fff00, tls=0x7fb6b94aa640}strace: Process 8473**

**attached=> {parent\_tid=[8473]}, 88) = 8473**

[pid 8473] rseq(0x7fb6b94aafe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 8451] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8473] <... rseq resumed>) = 0

[pid 8451] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] mmap(NULL, 8392704, PROT\_NONE,

MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 8473] set\_robust\_list(0x7fb6b94aa920, 24 <unfinished ...>

[pid 8451] <... mmap resumed>) = 0x7fb6b84a9000

[pid 8473] <... set\_robust\_list resumed>) = 0

[pid 8451] mprotect(0x7fb6b84aa000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 8473] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8451] <... mprotect resumed>) = 0

[pid 8473] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8451] rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

[pid 8451]

**clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THR**

**EAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_**

**CLEARTID, child\_tid=0x7fb6b8ca9910, parent\_tid=0x7fb6b8ca9910, exit\_signal=0,**

**stack=0x7fb6b84a9000, stack\_size=0x7fff00, tls=0x7fb6b8ca9640}strace: Process 8474**

**attached => {parent\_tid=[8474]}, 88) = 8474**

[pid 8474] rseq(0x7fb6b8ca9fe0, 0x20, 0, 0x53053053 <unfinished ...>

[pid 8451] rt\_sigprocmask(SIG\_SETMASK, [], <unfinished ...>

[pid 8474] <... rseq resumed>) = 0

[pid 8451] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8474] set\_robust\_list(0x7fb6b8ca9920, 24 <unfinished ...>

[pid 8451] futex(0x7fb6bb4ae910, FUTEX\_WAIT\_BITSET|FUTEX\_CLOCK\_REALTIME,

8469, NULL, FUTEX\_BITSET\_MATCH\_ANY <unfinished ...>

[pid 8474] <... set\_robust\_list resumed>) = 0

[pid 8474] rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

[pid 8472] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

[pid 8472] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19739, ...}, AT\_EMPTY\_PATH) =

0

[pid 8472] mmap(NULL, 19739, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fb6bb6db000

[pid 8469] futex(0x7fb6bb71ca48, FUTEX\_WAIT\_PRIVATE, 2, NULL <unfinished ...>

[pid 8472] close(3) = 0

[pid 8472] mmap(NULL, 134217728, PROT\_NONE,

MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_NORESERVE, -1, 0) = 0x7fb6b04a9000

[pid 8472] munmap(0x7fb6b04a9000, 62222336) = 0

[pid 8472] munmap(0x7fb6b8000000, 4886528) = 0

[pid 8472] mprotect(0x7fb6b4000000, 135168, PROT\_READ|PROT\_WRITE) = 0

[pid 8472] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1",

O\_RDONLY|O\_CLOEXEC) = 3

[pid 8472] read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

[pid 8472] newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH)

= 0

[pid 8472] mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0

<unfinished ...>

[pid 8470] futex(0x7fb6bb71ca48, FUTEX\_WAIT\_PRIVATE, 2, NULL <unfinished ...>

[pid 8472] <... mmap resumed>) = 0x7fb6b8489000

[pid 8472] mmap(0x7fb6b848c000, 94208, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7fb6b848c000

[pid 8472] mmap(0x7fb6b84a3000, 16384, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1a000) = 0x7fb6b84a3000

[pid 8472] mmap(0x7fb6b84a7000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) = 0x7fb6b84a7000

[pid 8472] close(3) = 0

[pid 8472] mprotect(0x7fb6b84a7000, 4096, PROT\_READ) = 0

[pid 8472] munmap(0x7fb6bb6db000, 19739) = 0

[pid 8472] futex(0x7fb6bb71ca48, FUTEX\_WAKE\_PRIVATE, 1) = 1

[pid 8469] <... futex resumed>) = 0

[pid 8472] futex(0x7fb6b84a8210, FUTEX\_WAKE\_PRIVATE, 2147483647 <unfinished ...>

[pid 8469] futex(0x7fb6bb71ca48, FUTEX\_WAKE\_PRIVATE, 1 <unfinished ...>

[pid 8472] <... futex resumed>) = 0

[pid 8470] <... futex resumed>) = 0

[pid 8469] <... futex resumed>) = 1

[pid 8472] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], <unfinished ...>

[pid 8470] futex(0x7fb6bb71ca48, FUTEX\_WAKE\_PRIVATE, 1 <unfinished ...>

[pid 8472] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8469] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], <unfinished ...>

[pid 8472] madvise(0x7fb6b94ab000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 8470] <... futex resumed>) = 0

[pid 8472] <... madvise resumed>) = 0

[pid 8469] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8472] exit(0 <unfinished ...>

[pid 8470] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], <unfinished ...>

[pid 8472] <... exit resumed>) = ?

[pid 8469] madvise(0x7fb6bacae000, 8368128, MADV\_DONTNEED <unfinished ...>

**[pid 8472] +++ exited with 0 +++**

[pid 8470] <... rt\_sigprocmask resumed>NULL, 8) = 0

[pid 8469] <... madvise resumed>) = 0

[pid 8469] exit(0 <unfinished ...>

[pid 8470] madvise(0x7fb6ba4ad000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 8469] <... exit resumed>) = ?

[pid 8473] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], <unfinished ...>

[pid 8470] <... madvise resumed>) = 0

[pid 8451] <... futex resumed>) = 0

[pid 8473] <... rt\_sigprocmask resumed>NULL, 8) = 0

**[pid 8469] +++ exited with 0 +++**

[pid 8451] futex(0x7fb6bacad910, FUTEX\_WAIT\_BITSET|FUTEX\_CLOCK\_REALTIME,

8470, NULL, FUTEX\_BITSET\_MATCH\_ANY <unfinished ...>

[pid 8473] madvise(0x7fb6b8caa000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 8470] exit(0 <unfinished ...>

[pid 8473] <... madvise resumed>) = 0

[pid 8470] <... exit resumed>) = ?

[pid 8451] <... futex resumed>) = 0

[pid 8473] exit(0 <unfinished ...>

**[pid 8470] +++ exited with 0 +++**

[pid 8451] futex(0x7fb6ba4ac910, FUTEX\_WAIT\_BITSET|FUTEX\_CLOCK\_REALTIME,

8471, NULL, FUTEX\_BITSET\_MATCH\_ANY <unfinished ...>

[pid 8473] <... exit resumed>) = ?

**[pid 8473] +++ exited with 0 +++**

[pid 8474] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], NULL, 8) = 0

[pid 8474] madvise(0x7fb6b84a9000, 8368128, MADV\_DONTNEED) = 0

[pid 8474] exit(0) = ?

**[pid 8474] +++ exited with 0 +++**

[pid 8471] rt\_sigprocmask(SIG\_BLOCK, ~[RT\_1], NULL, 8) = 0

[pid 8471] madvise(0x7fb6b9cac000, 8368128, MADV\_DONTNEED) = 0

[pid 8471] exit(0) = ?

**[pid 8471] +++ exited with 0 +++**

<... futex resumed>) = 0

munmap(0x7fb6bacae000, 8392704) = 0

munmap(0x7fb6ba4ad000, 8392704) = 0

clock\_gettime(CLOCK\_PROCESS\_CPUTIME\_ID, {tv\_sec=1, tv\_nsec=491704600}) = 0

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x4), ...},

AT\_EMPTY\_PATH) = 0

write(1, "\320\222\321\200\320\265\320\274\321\217

\320\262\321\213\320\277\320\276\320\273\320\275\320\265\320\275\320\270\321\217:"...,

48Время выполнения: 0.14812 сек

) = 48

write(1,

"\320\234\320\270\320\275\320\270\320\274\320\260\320\273\321\214\320\275\321\213\320\271

\321\215\320\273\320\265\320\274\320"..., 41Минимальный элемент: 7

) = 41

write(1,

"\320\234\320\260\320\272\321\201\320\270\320\274\320\260\320\273\321\214\320\275\321\213\

320\271 \321\215\320\273\320\265\320"..., 52Максимальный элемент: 2147483611

) = 52

exit\_group(0) = ?

+++ exited with 0 +++

**ЛР-3:**

execve("./main", ["./main"], 0x7ffc618760c0 /\* 35 vars \*/) = 0

brk(NULL) = 0x55975ad52000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffec4654c10) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7fc0d01ef000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19095, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19095, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fc0d01ea000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0 =\340\2563\265?\356\25x\261\27\313A#\350"..., 68,

896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2216304, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2260560, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7fc0cffc2000

mmap(0x7fc0cffea000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7fc0cffea000

mmap(0x7fc0d017f000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7fc0d017f000

mmap(0x7fc0d01d7000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x214000) = 0x7fc0d01d7000

mmap(0x7fc0d01dd000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fc0d01dd000

close(3) = 0

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7fc0cffbf000

arch\_prctl(ARCH\_SET\_FS, 0x7fc0cffbf740) = 0

set\_tid\_address(0x7fc0cffbfa10) = 23902

set\_robust\_list(0x7fc0cffbfa20, 24) = 0

rseq(0x7fc0cffc00e0, 0x20, 0, 0x53053053) = 0

mprotect(0x7fc0d01d7000, 16384, PROT\_READ) = 0

mprotect(0x55975ab66000, 4096, PROT\_READ) = 0

mprotect(0x7fc0d0229000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) =

0

munmap(0x7fc0d01ea000, 19095) = 0

write(1, "Enter the first filename with fi"..., 68Enter the first filename with file extension(.txt or

.doc or .rtf): ) = 68

getrandom("\x8c\x4f\x49\xdf\x0e\x4f\x65\x98", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x55975ad52000

brk(0x55975ad73000) = 0x55975ad73000

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x4), ...},

AT\_EMPTY\_PATH) = 0

read(0, 1.txt

"1.txt\n", 1024) = 6

openat(AT\_FDCWD, "1.txt", O\_WRONLY|O\_CREAT|O\_TRUNC, 0200) = 3

write(1, "Enter the second filename with f"..., 69Enter the second filename with file extension(.txt

or .doc or .rtf): ) = 69

read(0, 2.txt

"2.txt\n", 1024) = 6

openat(AT\_FDCWD, "2.txt", O\_WRONLY|O\_CREAT|O\_TRUNC, 0200) = 4

**openat(AT\_FDCWD, "/dev/shm/fd\_virt1",**

**O\_RDWR|O\_CREAT|O\_TRUNC|O\_NOFOLLOW|O\_CLOEXEC, 0777) = 5**

ftruncate(5, 1000) = 0

**mmap(NULL, 1000, PROT\_READ|PROT\_WRITE, MAP\_SHARED, 5, 0) = 0x7fc0d0228000**

**openat(AT\_FDCWD, "/dev/shm/fd\_virt2",**

**O\_RDWR|O\_CREAT|O\_TRUNC|O\_NOFOLLOW|O\_CLOEXEC, 0777) = 6**

ftruncate(6, 1000) = 0

**mmap(NULL, 1000, PROT\_READ|PROT\_WRITE, MAP\_SHARED, 6, 0) = 0x7fc0d01ee000**

clone(child\_stack=NULL,

flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD,

child\_tidptr=0x7fc0cffbfa10) = 23957

clone(child\_stack=NULL,

flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD,

child\_tidptr=0x7fc0cffbfa10) = 23958

read(0, piu piu piu

"piu piu piu\n", 1024) = 12

kill(23957, SIGUSR1) = 0

read(0, pu pu pu

"pu pu pu\n", 1024) = 9

kill(23957, SIGUSR1) = 0

read(0, "", 1024) = 0

kill(23957, SIGUSR2) = 0

kill(23958, SIGUSR2) = 0

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=23957, si\_uid=1000,

si\_status=0, si\_utime=215, si\_stime=525} ---

close(5) = 0

close(6) = 0

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=23958, si\_uid=1000,

si\_status=0, si\_utime=216, si\_stime=523} ---

close(3) = 0

close(4) = 0

unlink("/dev/shm/fd\_virt1") = 0

unlink("/dev/shm/fd\_virt2") = 0

**munmap(0x7fc0d0228000, 1000) = 0**

**munmap(0x7fc0d01ee000, 1000) = 0**

exit\_group(0) = ?

+++ exited with 0 +++

**ЛР-4:**

execve("./runtime", ["./runtime", "-f"], 0x7ffd9ec1dce8 /\* 36 vars \*/) = 0

brk(NULL) = 0x557d9b615000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7fff9ada08f0) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7f307f8e4000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

**openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3**

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19739, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19739, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f307f8df000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3**

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3,

"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\302\211\332Pq\2439\235\350\223\322\257\201\326\243\f"..., 68,

896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2220400, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2264656, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f307f6b6000

mprotect(0x7f307f6de000, 2023424, PROT\_NONE) = 0

mmap(0x7f307f6de000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f307f6de000

mmap(0x7f307f873000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1bd000) = 0x7f307f873000

mmap(0x7f307f8cc000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x215000) = 0x7f307f8cc000

mmap(0x7f307f8d2000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f307f8d2000

close(3) = 0

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) = 0x7f307f6b3000

arch\_prctl(ARCH\_SET\_FS, 0x7f307f6b3740) = 0

set\_tid\_address(0x7f307f6b3a10) = 82615

set\_robust\_list(0x7f307f6b3a20, 24) = 0

rseq(0x7f307f6b40e0, 0x20, 0, 0x53053053) = 0

mprotect(0x7f307f8cc000, 16384, PROT\_READ) = 0

mprotect(0x557d9aca1000, 4096, PROT\_READ) = 0

mprotect(0x7f307f91e000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) =

0

munmap(0x7f307f8df000, 19739) = 0

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0xa), ...},

AT\_EMPTY\_PATH) = 0

getrandom("\xa9\x2f\xca\x61\xb8\x13\xfd\x4e", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x557d9b615000

brk(0x557d9b636000) = 0x557d9b636000

write(1, "Please enter: M arg1 arg2 ... ar"..., 35Please enter: M arg1 arg2 ... argN

) = 35

write(1, "M - Selected function from libra"..., 35M - Selected function from library

) = 35

write(1, "M = -1 - Complete the execution\n", 32M = -1 - Complete the execution

) = 32

write(1, "M = 0 - Change the library \n", 28M = 0 - Change the library

) = 28

write(1, "M = 1 - Count the amount of prim"..., 71M = 1 - Count the amount of prime numbers in

[A, B]; arg1, arg2 - A, B

) = 71

write(1, "M = 2 - Array sorting; arg1 - si"..., 97M = 2 - Array sorting; arg1 - size of unsorted array,

arg2 ... argN - elements of unsorted array

) = 97

**openat(AT\_FDCWD, "./lib2/lib2.so", O\_RDONLY|O\_CLOEXEC) = 3**

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0777, st\_size=15920, ...}, AT\_EMPTY\_PATH) = 0

getcwd("/mnt/c/Users/\320\235\320\270\320\272\320\270\321\202\320\260/Desktop/Projects/MAI

8fac\_OS/lab4/programs", 128) = 68

mmap(NULL, 16496, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f307f8df000

mmap(0x7f307f8e0000, 4096, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f307f8e0000

mmap(0x7f307f8e1000, 4096, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f307f8e1000

mmap(0x7f307f8e2000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f307f8e2000

close(3) = 0

mprotect(0x7f307f8e2000, 4096, PROT\_READ) = 0

write(1, "\n", 1

) = 1

write(1, "2nd dynamic library loaded\n", 272nd dynamic library loaded

) = 27

write(1, "Now Eratosthenes Sieve is used f"..., 58Now Eratosthenes Sieve is used for counting

prime numbers

) = 58

write(1, "Now QuickSort is used to sort th"..., 40Now QuickSort is used to sort the array

) = 40

write(1, "\n", 1

) = 1

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0xa), ...},

AT\_EMPTY\_PATH) = 0

read(0, 1 1 10

"1 1 10\n", 1024) = 7

write(1, "\n", 1

) = 1

write(1, "The amount of prime numbers - 4\n"..., 33The amount of prime numbers - 4

) = 33

read(0, 2 5 5 4 3 2 1

"2 5 5 4 3 2 1\n", 1024) = 14

write(1, "Sorted array - 1 2 3 4 5 \n", 26Sorted array - 1 2 3 4 5

) = 26

write(1, "\n", 1

) = 1

read(0, 0

"0\n", 1024) = 2

write(1, "\n", 1

) = 1

munmap(0x7f307f8df000, 16496) = 0

**openat(AT\_FDCWD, "./lib1/lib1.so", O\_RDONLY|O\_CLOEXEC) = 3**

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0777, st\_size=15528, ...}, AT\_EMPTY\_PATH) = 0

getcwd("/mnt/c/Users/\320\235\320\270\320\272\320\270\321\202\320\260/Desktop/Projects/MAI

8fac\_OS/lab4/programs", 128) = 68

mmap(NULL, 16432, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f307f8df000

mmap(0x7f307f8e0000, 4096, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f307f8e0000

mmap(0x7f307f8e1000, 4096, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f307f8e1000

mmap(0x7f307f8e2000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f307f8e2000

close(3) = 0

mprotect(0x7f307f8e2000, 4096, PROT\_READ) = 0

write(1, "1st dynamic library loaded\n", 271st dynamic library loaded

) = 27

write(1, "Now The naive algorithm is used "..., 59Now The naive algorithm is used for counting

prime numbers

) = 59

write(1, "Now BubbleSort is used to sort t"..., 41Now BubbleSort is used to sort the array

) = 41

write(1, "Your library has been changed su"..., 45Your library has been changed successfuly!!!

) = 45

write(1, "\n", 1

) = 1

read(0, 1 1 10

"1 1 10\n", 1024) = 7

write(1, "\n", 1

) = 1

write(1, "The amount of prime numbers - 4\n"..., 33The amount of prime numbers - 4

) = 33

read(0, 2 5 5 4 3 2 1

"2 5 5 4 3 2 1\n", 1024) = 14

write(1, "Sorted array - 1 2 3 4 5 \n", 26Sorted array - 1 2 3 4 5

) = 26

write(1, "\n", 1

) = 1

read(0, -1

"-1\n", 1024) = 3

munmap(0x7f307f8df000, 16432) = 0

write(1, "The program successfuly finished"..., 33The program successfuly finished

) = 33

lseek(0, -1, SEEK\_CUR) = -1 ESPIPE (Illegal seek)

exit\_group(0) = ?

+++ exited with 0 +++

**ЛР-5-7:**

execve("./server", ["./server", "-f"], 0x7ffd0abe7ab8 /\* 35 vars \*/) = 0

brk(NULL) = 0x558e7d35f000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffc1e19cdd0) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) =

0x7f01bed10000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19739, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19739, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f01bed0b000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\240\233\1\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=634936, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 636784, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01bec6f000

mmap(0x7f01bec87000, 397312, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7f01bec87000

mmap(0x7f01bece8000, 106496, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x79000) = 0x7f01bece8000

mmap(0x7f01bed02000, 36864, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x92000) = 0x7f01bed02000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\237\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

pread64(3, "\4\0\0\0 \0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0"..., 48, 848) = 48

pread64(3,

"\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\302\211\332Pq\2439\235\350\223\322\257\201\326\243\f"...,

68, 896) = 68

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=2220400, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 2264656, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01bea46000

mprotect(0x7f01bea6e000, 2023424, PROT\_NONE) = 0

mmap(0x7f01bea6e000, 1658880, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x28000) = 0x7f01bea6e000

mmap(0x7f01bec03000, 360448, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x1bd000) = 0x7f01bec03000

mmap(0x7f01bec5c000, 24576, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x215000) = 0x7f01bec5c000

mmap(0x7f01bec62000, 52816, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01bec62000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libbsd.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=89096, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 94432, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01bea2e000

mprotect(0x7f01bea32000, 69632, PROT\_NONE) = 0

mmap(0x7f01bea32000, 53248, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f01bea32000

mmap(0x7f01bea3f000, 12288, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x11000) = 0x7f01bea3f000

mmap(0x7f01bea43000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14000) = 0x7f01bea43000

mmap(0x7f01bea45000, 224, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01bea45000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libsodium.so.23", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=355040, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 357440, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be9d6000

mprotect(0x7f01be9e2000, 303104, PROT\_NONE) = 0

mmap(0x7f01be9e2000, 229376, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xc000) = 0x7f01be9e2000

mmap(0x7f01bea1a000, 69632, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x44000) = 0x7f01bea1a000

mmap(0x7f01bea2c000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x55000) = 0x7f01bea2c000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpgm-5.3.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\340L\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=310264, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 329808, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be985000

mmap(0x7f01be989000, 172032, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f01be989000

mmap(0x7f01be9b3000, 118784, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x2e000) = 0x7f01be9b3000

mmap(0x7f01be9d0000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4a000) = 0x7f01be9d0000

mmap(0x7f01be9d2000, 14416, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01be9d2000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libnorm.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0 \255\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=497824, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 1223168, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be85a000

mprotect(0x7f01be864000, 446464, PROT\_NONE) = 0

mmap(0x7f01be864000, 286720, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xa000) = 0x7f01be864000

mmap(0x7f01be8aa000, 155648, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x50000) = 0x7f01be8aa000

mmap(0x7f01be8d1000, 16384, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x76000) = 0x7f01be8d1000

mmap(0x7f01be8d5000, 719360, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01be8d5000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) =

0x7f01be858000

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgssapi\_krb5.so.2", O\_RDONLY|O\_CLOEXEC) =

3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=338648, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 340960, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be804000

mprotect(0x7f01be80f000, 282624, PROT\_NONE) = 0

mmap(0x7f01be80f000, 229376, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb000) = 0x7f01be80f000

mmap(0x7f01be847000, 49152, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x43000) = 0x7f01be847000

mmap(0x7f01be854000, 16384, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4f000) = 0x7f01be854000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2260296, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 2275520, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be5d8000

mprotect(0x7f01be672000, 1576960, PROT\_NONE) = 0

mmap(0x7f01be672000, 1118208, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9a000) = 0x7f01be672000

mmap(0x7f01be783000, 454656, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x1ab000) = 0x7f01be783000

mmap(0x7f01be7f3000, 57344, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21a000) = 0x7f01be7f3000

mmap(0x7f01be801000, 10432, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01be801000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=125488, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 127720, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be5b8000

mmap(0x7f01be5bb000, 94208, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f01be5bb000

mmap(0x7f01be5d2000, 16384, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x1a000) = 0x7f01be5d2000

mmap(0x7f01be5d6000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d000) = 0x7f01be5d6000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libmd.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=47472, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 49384, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be5ab000

mmap(0x7f01be5ad000, 28672, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f01be5ad000

mmap(0x7f01be5b4000, 8192, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x9000) = 0x7f01be5b4000

mmap(0x7f01be5b6000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xa000) = 0x7f01be5b6000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpthread.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=21448, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 16424, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be5a6000

mmap(0x7f01be5a7000, 4096, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f01be5a7000

mmap(0x7f01be5a8000, 4096, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x2000) = 0x7f01be5a8000

mmap(0x7f01be5a9000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f01be5a9000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=940560, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 942344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be4bf000

mmap(0x7f01be4cd000, 507904, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe000) = 0x7f01be4cd000

mmap(0x7f01be549000, 372736, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x8a000) = 0x7f01be549000

mmap(0x7f01be5a4000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xe4000) = 0x7f01be5a4000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) =

0x7f01be4bd000

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libkrb5.so.3", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=827936, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 830576, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be3f2000

mprotect(0x7f01be413000, 634880, PROT\_NONE) = 0

mmap(0x7f01be413000, 380928, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x21000) = 0x7f01be413000

mmap(0x7f01be470000, 249856, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x7e000) = 0x7f01be470000

mmap(0x7f01be4ae000, 61440, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xbb000) = 0x7f01be4ae000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libk5crypto.so.3", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=182864, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 188472, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be3c3000

mprotect(0x7f01be3c7000, 163840, PROT\_NONE) = 0

mmap(0x7f01be3c7000, 110592, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f01be3c7000

mmap(0x7f01be3e2000, 49152, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x1f000) = 0x7f01be3e2000

mmap(0x7f01be3ef000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2b000) = 0x7f01be3ef000

mmap(0x7f01be3f1000, 56, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01be3f1000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libcom\_err.so.2", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=18504, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 20552, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be3bd000

mmap(0x7f01be3bf000, 4096, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f01be3bf000

mmap(0x7f01be3c0000, 4096, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x3000) = 0x7f01be3c0000

mmap(0x7f01be3c1000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f01be3c1000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libkrb5support.so.0", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=52016, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 54224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be3af000

mprotect(0x7f01be3b2000, 36864, PROT\_NONE) = 0

mmap(0x7f01be3b2000, 24576, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f01be3b2000

mmap(0x7f01be3b8000, 8192, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x9000) = 0x7f01be3b8000

mmap(0x7f01be3bb000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb000) = 0x7f01be3bb000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libkeyutils.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=22600, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 24592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be3a8000

mmap(0x7f01be3aa000, 8192, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f01be3aa000

mmap(0x7f01be3ac000, 4096, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0x4000) = 0x7f01be3ac000

mmap(0x7f01be3ad000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7f01be3ad000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libresolv.so.2", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=68552, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) =

0x7f01be3a6000

mmap(NULL, 80456, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) =

0x7f01be392000

mmap(0x7f01be395000, 40960, PROT\_READ|PROT\_EXEC,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f01be395000

mmap(0x7f01be39f000, 12288, PROT\_READ,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3,

0xd000) = 0x7f01be39f000

mmap(0x7f01be3a2000, 8192, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xf000) = 0x7f01be3a2000

mmap(0x7f01be3a4000, 6728, PROT\_READ|PROT\_WRITE,

MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f01be3a4000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) =

0x7f01be390000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1,

0) =

0x7f01be38d000

arch\_prctl(ARCH\_SET\_FS, 0x7f01be38d9c0) = 0

set\_tid\_address(0x7f01be38dc90) = 131424

set\_robust\_list(0x7f01be38dca0, 24) = 0

rseq(0x7f01be38e360, 0x20, 0, 0x53053053) = 0

mprotect(0x7f01bec5c000, 16384, PROT\_READ) = 0

mprotect(0x7f01be3a2000, 4096, PROT\_READ) = 0

mprotect(0x7f01be3ad000, 4096, PROT\_READ) = 0

mprotect(0x7f01be3bb000, 4096, PROT\_READ) = 0

mprotect(0x7f01be3c1000, 4096, PROT\_READ) = 0

mprotect(0x7f01be3ef000, 4096, PROT\_READ) = 0

mprotect(0x7f01be4ae000, 53248, PROT\_READ) = 0

mprotect(0x7f01be5a4000, 4096, PROT\_READ) = 0

mprotect(0x7f01be5a9000, 4096, PROT\_READ) = 0

mprotect(0x7f01be5b6000, 4096, PROT\_READ) = 0

mprotect(0x7f01be5d6000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0)

=

0x7f01be38b000

mprotect(0x7f01be7f3000, 45056, PROT\_READ) = 0

mprotect(0x7f01be854000, 8192, PROT\_READ) = 0

mprotect(0x7f01be8d1000, 12288, PROT\_READ) = 0

mprotect(0x7f01be9d0000, 4096, PROT\_READ) = 0

mprotect(0x7f01bea2c000, 4096, PROT\_READ) = 0

mprotect(0x7f01bea43000, 4096, PROT\_READ) = 0

mprotect(0x7f01bed02000, 32768, PROT\_READ) = 0

mprotect(0x558e7bc21000, 4096, PROT\_READ) = 0

mprotect(0x7f01bed4a000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) =

0

munmap(0x7f01bed0b000, 19739) = 0

getrandom("\x5b\x71\x96\xf8\xfc\x9b\x6f\x1d", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x558e7d35f000

brk(0x558e7d380000) = 0x558e7d380000

openat(AT\_FDCWD, "/sys/devices/system/cpu/online", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "0-15\n", 1024) = 5

close(3) = 0

openat(AT\_FDCWD, "/sys/devices/system/cpu",

O\_RDONLY|O\_NONBLOCK|O\_CLOEXEC|O\_DIRECTORY) = 3

newfstatat(3, "", {st\_mode=S\_IFDIR|0755, st\_size=0, ...}, AT\_EMPTY\_PATH) = 0

getdents64(3, 0x558e7d370ee0 /\* 32 entries \*/, 32768) = 936

getdents64(3, 0x558e7d370ee0 /\* 0 entries \*/, 32768) = 0

close(3) = 0

getpid() = 131424

sched\_getaffinity(131424, 128, [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]) = 32

newfstatat(AT\_FDCWD, "/etc/nsswitch.conf", {st\_mode=S\_IFREG|0644, st\_size=510, ...}, 0) = 0

newfstatat(AT\_FDCWD, "/", {st\_mode=S\_IFDIR|0755, st\_size=4096, ...}, 0) = 0

openat(AT\_FDCWD, "/etc/nsswitch.conf", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=510, ...}, AT\_EMPTY\_PATH) = 0

read(3, "# /etc/nsswitch.conf\n#\n# Example"..., 4096) = 510

read(3, "", 4096) = 0

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=510, ...}, AT\_EMPTY\_PATH) = 0

close(3) = 0

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19739, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19739, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f01bed0b000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3", 0x7ffc1e199d10, 0) =

-1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2", 0x7ffc1e199d10, 0) =

-1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/haswell/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1

ENOENT

(No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/haswell/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) =

-1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT

(No such

file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) =

-1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT

(No such

file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/tls", 0x7ffc1e199d10, 0) = -1 ENOENT (No such

file or

directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/haswell/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1

ENOENT (No

such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/haswell/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT (No

such

file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC)

= -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No

such

file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT

(No such file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64-linux-gnu", {st\_mode=S\_IFDIR|0755, st\_size=24576, ...},

0) = 0

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v3", 0x7ffc1e199d10, 0)

= -1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/glibc-hwcaps/x86-64-v2", 0x7ffc1e199d10, 0)

= -1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/haswell/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/haswell/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC)

= -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/haswell", 0x7ffc1e199d10, 0) = -1

ENOENT (No

such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC)

= -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/x86\_64", 0x7ffc1e199d10, 0) = -1

ENOENT (No

such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC)

= -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/tls", 0x7ffc1e199d10, 0) = -1 ENOENT (No

such file

or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/haswell/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1

ENOENT

(No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/haswell/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) =

-1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT

(No

such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) =

-1 ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT

(No

such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) =

-1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu", {st\_mode=S\_IFDIR|0755, st\_size=24576,

...}, 0) =

0

openat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v3/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC)

= -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v3", 0x7ffc1e199d10, 0) = -1 ENOENT (No

such file

or directory)

openat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v2/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC)

= -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/glibc-hwcaps/x86-64-v2", 0x7ffc1e199d10, 0) = -1 ENOENT (No

such file

or directory)

openat(AT\_FDCWD, "/lib/tls/haswell/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such

file or

directory)

openat(AT\_FDCWD, "/lib/tls/haswell/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT

(No

such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/lib/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT

(No

such file or directory)

newfstatat(AT\_FDCWD, "/lib/tls/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/lib/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No

such file

or directory)

newfstatat(AT\_FDCWD, "/lib/tls", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/haswell/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT

(No such file or directory)

newfstatat(AT\_FDCWD, "/lib/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file

or

directory)

openat(AT\_FDCWD, "/lib/haswell/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT

(No such

file or directory)

newfstatat(AT\_FDCWD, "/lib/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/lib/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT

(No such

file or directory)

newfstatat(AT\_FDCWD, "/lib/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/lib/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such

file or

directory)

newfstatat(AT\_FDCWD, "/lib", {st\_mode=S\_IFDIR|0755, st\_size=4096, ...}, 0) = 0

openat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v3/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v3", 0x7ffc1e199d10, 0) = -1 ENOENT

(No such

file or directory)

openat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v2/libnss\_db.so.2",

O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/glibc-hwcaps/x86-64-v2", 0x7ffc1e199d10, 0) = -1 ENOENT

(No such

file or directory)

openat(AT\_FDCWD, "/usr/lib/tls/haswell/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) =

-1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No

such file or

directory)

openat(AT\_FDCWD, "/usr/lib/tls/haswell/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT

(No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/usr/lib/tls/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT

(No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/usr/lib/tls/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No

such

file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/tls", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/usr/lib/haswell/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/haswell/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such

file or

directory)

openat(AT\_FDCWD, "/usr/lib/haswell/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No

such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/haswell", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No

such file or directory)

newfstatat(AT\_FDCWD, "/usr/lib/x86\_64", 0x7ffc1e199d10, 0) = -1 ENOENT (No such file or

directory)

openat(AT\_FDCWD, "/usr/lib/libnss\_db.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No

such file

or directory)

newfstatat(AT\_FDCWD, "/usr/lib", {st\_mode=S\_IFDIR|0755, st\_size=4096, ...}, 0) = 0

munmap(0x7f01bed0b000, 19739) = 0

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=19739, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 19739, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f01bed0b000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/lib/x86\_64-linux-gnu/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC)

= -1

ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No

such file

or directory)

openat(AT\_FDCWD, "/usr/lib/libnss\_db-2.35.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT

(No such

file or directory)

munmap(0x7f01bed0b000, 19739) = 0

openat(AT\_FDCWD, "/etc/protocols", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=2932, ...}, AT\_EMPTY\_PATH) = 0

lseek(3, 0, SEEK\_SET) = 0

read(3, "# Internet (IP) protocols\n#\n# Up"..., 4096) = 2932

read(3, "", 4096) = 0

close(3) = 0

eventfd2(0, EFD\_CLOEXEC) = 3

fcntl(3, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(3, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(3, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(3, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 131424

getpid() = 131424

getrandom("\xa6\xcb\x1c\x96\xbc\xfd\x7f\x92\x2a\x8d\xa0\x6e\x97\x0e\x06\x67", 16, 0) = 16

getrandom("\x1c\xb2\xeb\x1a\x34\x05\xe9\x64\x11\x12\x50\x0f\xce\xf9\xbe\xed", 16, 0) = 16

eventfd2(0, EFD\_CLOEXEC) = 4

fcntl(4, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(4, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(4, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(4, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 131424

**epoll\_create1(EPOLL\_CLOEXEC) = 5**

epoll\_ctl(5, EPOLL\_CTL\_ADD, 4, {events=0, data={u32=2100761184, u64=94070474478176}})

= 0

epoll\_ctl(5, EPOLL\_CTL\_MOD, 4, {events=EPOLLIN, data={u32=2100761184,

u64=94070474478176}}) = 0

getpid() = 131424

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7f01bead7870, sa\_mask=[],

sa\_flags=SA\_RESTORER|SA\_ONSTACK|SA\_RESTART|SA\_SIGINFO,

sa\_restorer=0x7f01bea88520},

NULL, 8) = 0

rt\_sigprocmask(SIG\_UNBLOCK, [RTMIN RT\_1], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK,

-1, 0) =

0x7f01bdb8a000

mprotect(0x7f01bdb8b000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD

|CLON

E\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID,

child\_tid=0x7f01be38a910, parent\_tid=0x7f01be38a910, exit\_signal=0, stack=0x7f01bdb8a000,

stack\_size=0x7ffc80, tls=0x7f01be38a640} => {parent\_tid=[131425]}, 88) = 131425

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

eventfd2(0, EFD\_CLOEXEC) = 6

fcntl(6, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(6, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(6, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(6, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 131424

**epoll\_create1(EPOLL\_CLOEXEC) = 7**

epoll\_ctl(7, EPOLL\_CTL\_ADD, 6, {events=0, data={u32=2100781664, u64=94070474498656}})

= 0

epoll\_ctl(7, EPOLL\_CTL\_MOD, 6, {events=EPOLLIN, data={u32=2100781664,

u64=94070474498656}}) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK,

-1, 0) =

0x7f01bd389000

mprotect(0x7f01bd38a000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD

|CLON

E\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID,

child\_tid=0x7f01bdb89910, parent\_tid=0x7f01bdb89910, exit\_signal=0, stack=0x7f01bd389000,

stack\_size=0x7ffc80, tls=0x7f01bdb89640} => {parent\_tid=[131426]}, 88) = 131426

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

eventfd2(0, EFD\_CLOEXEC) = 8

fcntl(8, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(8, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(8, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(8, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 131424

getpid() = 131424

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

**socket(AF\_NETLINK, SOCK\_RAW|SOCK\_CLOEXEC, NETLINK\_ROUTE) = 9**

**bind(9, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 0**

getsockname(9, {sa\_family=AF\_NETLINK, nl\_pid=131424, nl\_groups=00000000}, [12]) = 0

**sendto(9, [{nlmsg\_len=20, nlmsg\_type=RTM\_GETLINK, nlmsg\_flags=NLM\_F\_REQUEST|NLM\_F\_DUMP, nlmsg\_seq=1709268905, nlmsg\_pid=0}, {ifi\_family=AF\_UNSPEC, ...}], 20, 0, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 20**

recvmsg(9, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[[{nlmsg\_len=1336, nlmsg\_type=RTM\_NEWLINK, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268905, nlmsg\_pid=131424}, {ifi\_family=AF\_UNSPEC, ifi\_type=ARPHRD\_LOOPBACK, ifi\_index=if\_nametoindex("lo"), ifi\_flags=IFF\_UP|IFF\_LOOPBACK|IFF\_RUNNING|IFF\_LOWER\_UP, ifi\_change=0}, [[{nla\_len=7, nla\_type=IFLA\_IFNAME}, "lo"], [{nla\_len=8, nla\_type=IFLA\_TXQLEN}, 1000], [{nla\_len=5, nla\_type=IFLA\_OPERSTATE}, 0], [{nla\_len=5, nla\_type=IFLA\_LINKMODE}, 0], [{nla\_len=8, nla\_type=IFLA\_MTU}, 65536], [{nla\_len=8, nla\_type=IFLA\_MIN\_MTU}, 0], [{nla\_len=8, nla\_type=IFLA\_MAX\_MTU}, 0], [{nla\_len=8, nla\_type=IFLA\_GROUP}, 0], [{nla\_len=8, nla\_type=IFLA\_PROMISCUITY}, 0], [{nla\_len=8, nla\_type=IFLA\_NUM\_TX\_QUEUES}, 1], [{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SEGS}, 65535], [{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SIZE}, 65536], [{nla\_len=8, nla\_type=IFLA\_NUM\_RX\_QUEUES}, 1], [{nla\_len=5, nla\_type=IFLA\_CARRIER}, 1], [{nla\_len=12, nla\_type=IFLA\_QDISC}, "noqueue"], [{nla\_len=8, nla\_type=IFLA\_CARRIER\_CHANGES}, 0], [{nla\_len=8, nla\_type=IFLA\_CARRIER\_UP\_COUNT}, 0], [{nla\_len=8, nla\_type=IFLA\_CARRIER\_DOWN\_COUNT}, 0], [{nla\_len=5, nla\_type=IFLA\_PROTO\_DOWN}, 0], [{nla\_len=36, nla\_type=IFLA\_MAP}, {mem\_start=0, mem\_end=0, base\_addr=0, irq=0, dma=0, port=0}], [{nla\_len=10, nla\_type=IFLA\_ADDRESS}, 00:00:00:00:00:00], [{nla\_len=10, nla\_type=IFLA\_BROADCAST}, 00:00:00:00:00:00], [{nla\_len=196, nla\_type=IFLA\_STATS64}, {rx\_packets=213128, tx\_packets=213128, rx\_bytes=491245870, tx\_bytes=491245870, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}], [{nla\_len=100, nla\_type=IFLA\_STATS}, {rx\_packets=213128, tx\_packets=213128, rx\_bytes=491245870, tx\_bytes=491245870, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}], [{nla\_len=12, nla\_type=IFLA\_XDP}, [{nla\_len=5, nla\_type=IFLA\_XDP\_ATTACHED}, XDP\_ATTACHED\_NONE]], [{nla\_len=780, nla\_type=IFLA\_AF\_SPEC}, [[{nla\_len=136, nla\_type=AF\_INET}, [{nla\_len=132, nla\_type=IFLA\_INET\_CONF}, [[IPV4\_DEVCONF\_FORWARDING-1] = 0, [IPV4\_DEVCONF\_MC\_FORWARDING-1] = 0, [IPV4\_DEVCONF\_PROXY\_ARP-1] = 0, [IPV4\_DEVCONF\_ACCEPT\_REDIRECTS-1] = 1, [IPV4\_DEVCONF\_SECURE\_REDIRECTS-1] = 1, [IPV4\_DEVCONF\_SEND\_REDIRECTS-1] = 1, [IPV4\_DEVCONF\_SHARED\_MEDIA-1] = 1, [IPV4\_DEVCONF\_RP\_FILTER-1] = 2, [IPV4\_DEVCONF\_ACCEPT\_SOURCE\_ROUTE-1] = 0, [IPV4\_DEVCONF\_BOOTP\_RELAY-1] = 0, [IPV4\_DEVCONF\_LOG\_MARTIANS-1] = 0, [IPV4\_DEVCONF\_TAG-1] = 0, [IPV4\_DEVCONF\_ARPFILTER-1] = 0, [IPV4\_DEVCONF\_MEDIUM\_ID-1] = 0, [IPV4\_DEVCONF\_NOXFRM-1] = 1, [IPV4\_DEVCONF\_NOPOLICY-1] = 1, [IPV4\_DEVCONF\_FORCE\_IGMP\_VERSION-1] = 0, [IPV4\_DEVCONF\_ARP\_ANNOUNCE-1] = 0, [IPV4\_DEVCONF\_ARP\_IGNORE-1] = 0, [IPV4\_DEVCONF\_PROMOTE\_SECONDARIES-1] = 1, [IPV4\_DEVCONF\_ARP\_ACCEPT-1] = 0, [IPV4\_DEVCONF\_ARP\_NOTIFY-1] = 0, [IPV4\_DEVCONF\_ACCEPT\_LOCAL-1] = 0, [IPV4\_DEVCONF\_SRC\_VMARK-1] = 0, [IPV4\_DEVCONF\_PROXY\_ARP\_PVLAN-1] = 0, [IPV4\_DEVCONF\_ROUTE\_LOCALNET-1] = 0, [IPV4\_DEVCONF\_IGMPV2\_UNSOLICITED\_REPORT\_INTERVAL-1] = 10000, [IPV4\_DEVCONF\_IGMPV3\_UNSOLICITED\_REPORT\_INTERVAL-1] = 1000, [IPV4\_DEVCONF\_IGNORE\_ROUTES\_WITH\_LINKDOWN-1] = 0, [IPV4\_DEVCONF\_DROP\_UNICAST\_IN\_L2\_MULTICAST-1] = 0, [IPV4\_DEVCONF\_DROP\_GRATUITOUS\_ARP-1] = 0, [IPV4\_DEVCONF\_BC\_FORWARDING-1] = 0]]], [{nla\_len=640, nla\_type=AF\_INET6}, [[{nla\_len=8, nla\_type=IFLA\_INET6\_FLAGS}, IF\_READY], [{nla\_len=20, nla\_type=IFLA\_INET6\_CACHEINFO}, {max\_reasm\_len=65535, tstamp=44, reachable\_time=20270, retrans\_time=1000}], [{nla\_len=228, nla\_type=IFLA\_INET6\_CONF}, [[DEVCONF\_FORWARDING] = 0, [DEVCONF\_HOPLIMIT] = 64, [DEVCONF\_MTU6] = 65536, [DEVCONF\_ACCEPT\_RA] = 1, [DEVCONF\_ACCEPT\_REDIRECTS] = 1, [DEVCONF\_AUTOCONF] = 1, [DEVCONF\_DAD\_TRANSMITS] = 1, [DEVCONF\_RTR\_SOLICITS] = -1, [DEVCONF\_RTR\_SOLICIT\_INTERVAL] = 4000, [DEVCONF\_RTR\_SOLICIT\_DELAY] = 1000, [DEVCONF\_USE\_TEMPADDR] = -1, [DEVCONF\_TEMP\_VALID\_LFT] = 604800, [DEVCONF\_TEMP\_PREFERED\_LFT] = 86400, [DEVCONF\_REGEN\_MAX\_RETRY] = 3, [DEVCONF\_MAX\_DESYNC\_FACTOR] = 600, [DEVCONF\_MAX\_ADDRESSES] = 16, [DEVCONF\_FORCE\_MLD\_VERSION] = 0, [DEVCONF\_ACCEPT\_RA\_DEFRTR] = 1, [DEVCONF\_ACCEPT\_RA\_PINFO] = 1, [DEVCONF\_ACCEPT\_RA\_RTR\_PREF] = 0, [DEVCONF\_RTR\_PROBE\_INTERVAL] = 0, [DEVCONF\_ACCEPT\_RA\_RT\_INFO\_MAX\_PLEN] = 0, [DEVCONF\_PROXY\_NDP] = 0, [DEVCONF\_OPTIMISTIC\_DAD] = 0, [DEVCONF\_ACCEPT\_SOURCE\_ROUTE] = 0, [DEVCONF\_MC\_FORWARDING] = 0, [DEVCONF\_DISABLE\_IPV6] = 0, [DEVCONF\_ACCEPT\_DAD] = -1, [DEVCONF\_FORCE\_TLLAO] = 0, [DEVCONF\_NDISC\_NOTIFY] = 0, [DEVCONF\_MLDV1\_UNSOLICITED\_REPORT\_INTERVAL] = 10000, [DEVCONF\_MLDV2\_UNSOLICITED\_REPORT\_INTERVAL] = 1000, ...]], [{nla\_len=300, nla\_type=IFLA\_INET6\_STATS}, [[IPSTATS\_MIB\_NUM] = 37, [IPSTATS\_MIB\_INPKTS] = 0, [IPSTATS\_MIB\_INOCTETS] = 0, [IPSTATS\_MIB\_INDELIVERS] = 0, [IPSTATS\_MIB\_OUTFORWDATAGRAMS] = 0, [IPSTATS\_MIB\_OUTPKTS] = 0, [IPSTATS\_MIB\_OUTOCTETS] = 0, [IPSTATS\_MIB\_INHDRERRORS] = 0, [IPSTATS\_MIB\_INTOOBIGERRORS] = 0, [IPSTATS\_MIB\_INNOROUTES] = 0, [IPSTATS\_MIB\_INADDRERRORS] = 0, [IPSTATS\_MIB\_INUNKNOWNPROTOS] = 0, [IPSTATS\_MIB\_INTRUNCATEDPKTS] = 0, [IPSTATS\_MIB\_INDISCARDS] = 0, [IPSTATS\_MIB\_OUTDISCARDS] = 0, [IPSTATS\_MIB\_OUTNOROUTES] = 0, [IPSTATS\_MIB\_REASMTIMEOUT] = 0, [IPSTATS\_MIB\_REASMREQDS] = 0, [IPSTATS\_MIB\_REASMOKS] = 0, [IPSTATS\_MIB\_REASMFAILS] = 0, [IPSTATS\_MIB\_FRAGOKS] = 0, [IPSTATS\_MIB\_FRAGFAILS] = 0, [IPSTATS\_MIB\_FRAGCREATES] = 0, [IPSTATS\_MIB\_INMCASTPKTS] = 0, [IPSTATS\_MIB\_OUTMCASTPKTS] = 0, [IPSTATS\_MIB\_INBCASTPKTS] = 0, [IPSTATS\_MIB\_OUTBCASTPKTS] = 0, [IPSTATS\_MIB\_INMCASTOCTETS] = 0, [IPSTATS\_MIB\_OUTMCASTOCTETS] = 0, [IPSTATS\_MIB\_INBCASTOCTETS] = 0, [IPSTATS\_MIB\_OUTBCASTOCTETS] = 0, [IPSTATS\_MIB\_CSUMERRORS] = 0, ...]], [{nla\_len=52, nla\_type=IFLA\_INET6\_ICMP6STATS}, [[ICMP6\_MIB\_NUM] = 6, [ICMP6\_MIB\_INMSGS] = 0, [ICMP6\_MIB\_INERRORS] = 0, [ICMP6\_MIB\_OUTMSGS] = 0, [ICMP6\_MIB\_OUTERRORS] = 0, [ICMP6\_MIB\_CSUMERRORS] = 0]], [{nla\_len=20, nla\_type=IFLA\_INET6\_TOKEN}, inet\_pton(AF\_INET6, "::")], [{nla\_len=5, nla\_type=IFLA\_INET6\_ADDR\_GEN\_MODE}, IN6\_ADDR\_GEN\_MODE\_EUI64]]]]]]], [{nlmsg\_len=1404, nlmsg\_type=RTM\_NEWLINK, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268905, nlmsg\_pid=131424}, {ifi\_family=AF\_UNSPEC, ifi\_type=ARPHRD\_ETHER, ifi\_index=if\_nametoindex("eth0"), ifi\_flags=IFF\_UP|IFF\_BROADCAST|IFF\_RUNNING|IFF\_MULTICAST|IFF\_LOWER\_UP, ifi\_change=0}, [[{nla\_len=9, nla\_type=IFLA\_IFNAME}, "eth0"], [{nla\_len=8, nla\_type=IFLA\_TXQLEN}, 1000], [{nla\_len=5, nla\_type=IFLA\_OPERSTATE}, 6], [{nla\_len=5, nla\_type=IFLA\_LINKMODE}, 0], [{nla\_len=8, nla\_type=IFLA\_MTU}, 1500], [{nla\_len=8, nla\_type=IFLA\_MIN\_MTU}, 68], [{nla\_len=8, nla\_type=IFLA\_MAX\_MTU}, 65521], [{nla\_len=8, nla\_type=IFLA\_GROUP}, 0], [{nla\_len=8, nla\_type=IFLA\_PROMISCUITY}, 0], [{nla\_len=8, nla\_type=IFLA\_NUM\_TX\_QUEUES}, 64], [{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SEGS}, 65535], [{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SIZE}, 62780], [{nla\_len=8, nla\_type=IFLA\_NUM\_RX\_QUEUES}, 64], [{nla\_len=5, nla\_type=IFLA\_CARRIER}, 1], [{nla\_len=7, nla\_type=IFLA\_QDISC}, "mq"], [{nla\_len=8, nla\_type=IFLA\_CARRIER\_CHANGES}, 1], [{nla\_len=8, nla\_type=IFLA\_CARRIER\_UP\_COUNT}, 1], [{nla\_len=8, nla\_type=IFLA\_CARRIER\_DOWN\_COUNT}, 0], [{nla\_len=5, nla\_type=IFLA\_PROTO\_DOWN}, 0], [{nla\_len=36, nla\_type=IFLA\_MAP}, {mem\_start=0, mem\_end=0, base\_addr=0, irq=0, dma=0, port=0}], [{nla\_len=10, nla\_type=IFLA\_ADDRESS}, 00:15:5d:6e:81:5d], [{nla\_len=10, nla\_type=IFLA\_BROADCAST}, ff:ff:ff:ff:ff:ff], [{nla\_len=196, nla\_type=IFLA\_STATS64}, {rx\_packets=15816, tx\_packets=10540, rx\_bytes=22736340, tx\_bytes=3646286, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=3666, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}], [{nla\_len=100, nla\_type=IFLA\_STATS}, {rx\_packets=15816, tx\_packets=10540, rx\_bytes=22736340, tx\_bytes=3646286, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=3666, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}], [{nla\_len=12, nla\_type=IFLA\_XDP}, [{nla\_len=5, nla\_type=IFLA\_XDP\_ATTACHED}, XDP\_ATTACHED\_NONE]], [{nla\_len=10, nla\_type=IFLA\_PERM\_ADDRESS}, 00:15:5d:6e:81:5d], [{nla\_len=780, nla\_type=IFLA\_AF\_SPEC}, [[{nla\_len=136, nla\_type=AF\_INET}, [{nla\_len=132, nla\_type=IFLA\_INET\_CONF}, [[IPV4\_DEVCONF\_FORWARDING-1] = 0, [IPV4\_DEVCONF\_MC\_FORWARDING-1] = 0, [IPV4\_DEVCONF\_PROXY\_ARP-1] = 0, [IPV4\_DEVCONF\_ACCEPT\_REDIRECTS-1] = 1, [IPV4\_DEVCONF\_SECURE\_REDIRECTS-1] = 1, [IPV4\_DEVCONF\_SEND\_REDIRECTS-1] = 1, [IPV4\_DEVCONF\_SHARED\_MEDIA-1] = 1, [IPV4\_DEVCONF\_RP\_FILTER-1] = 2, [IPV4\_DEVCONF\_ACCEPT\_SOURCE\_ROUTE-1] = 0, [IPV4\_DEVCONF\_BOOTP\_RELAY-1] = 0, [IPV4\_DEVCONF\_LOG\_MARTIANS-1] = 0, [IPV4\_DEVCONF\_TAG-1] = 0, [IPV4\_DEVCONF\_ARPFILTER-1] = 0, [IPV4\_DEVCONF\_MEDIUM\_ID-1] = 0, [IPV4\_DEVCONF\_NOXFRM-1] = 0, [IPV4\_DEVCONF\_NOPOLICY-1] = 0, [IPV4\_DEVCONF\_FORCE\_IGMP\_VERSION-1] = 0, [IPV4\_DEVCONF\_ARP\_ANNOUNCE-1] = 0, [IPV4\_DEVCONF\_ARP\_IGNORE-1] = 0, [IPV4\_DEVCONF\_PROMOTE\_SECONDARIES-1] = 1, [IPV4\_DEVCONF\_ARP\_ACCEPT-1] = 0, [IPV4\_DEVCONF\_ARP\_NOTIFY-1] = 0, [IPV4\_DEVCONF\_ACCEPT\_LOCAL-1] = 0, [IPV4\_DEVCONF\_SRC\_VMARK-1] = 0, [IPV4\_DEVCONF\_PROXY\_ARP\_PVLAN-1] = 0, [IPV4\_DEVCONF\_ROUTE\_LOCALNET-1] = 0, [IPV4\_DEVCONF\_IGMPV2\_UNSOLICITED\_REPORT\_INTERVAL-1] = 10000, [IPV4\_DEVCONF\_IGMPV3\_UNSOLICITED\_REPORT\_INTERVAL-1] = 1000, [IPV4\_DEVCONF\_IGNORE\_ROUTES\_WITH\_LINKDOWN-1] = 0, [IPV4\_DEVCONF\_DROP\_UNICAST\_IN\_L2\_MULTICAST-1] = 0, [IPV4\_DEVCONF\_DROP\_GRATUITOUS\_ARP-1] = 0, [IPV4\_DEVCONF\_BC\_FORWARDING-1] = 0]]], [{nla\_len=640, nla\_type=AF\_INET6}, [[{nla\_len=8, nla\_type=IFLA\_INET6\_FLAGS}, IF\_RS\_SENT|IF\_READY], [{nla\_len=20, nla\_type=IFLA\_INET6\_CACHEINFO}, {max\_reasm\_len=65535, tstamp=61, reachable\_time=40530, retrans\_time=1000}], [{nla\_len=228, nla\_type=IFLA\_INET6\_CONF}, [[DEVCONF\_FORWARDING] = 0, [DEVCONF\_HOPLIMIT] = 64, [DEVCONF\_MTU6] = 1500, [DEVCONF\_ACCEPT\_RA] = 1, [DEVCONF\_ACCEPT\_REDIRECTS] = 1, [DEVCONF\_AUTOCONF] = 1, [DEVCONF\_DAD\_TRANSMITS] = 1, [DEVCONF\_RTR\_SOLICITS] = -1, [DEVCONF\_RTR\_SOLICIT\_INTERVAL] = 4000, [DEVCONF\_RTR\_SOLICIT\_DELAY] = 1000, [DEVCONF\_USE\_TEMPADDR] = 0, [DEVCONF\_TEMP\_VALID\_LFT] = 604800, [DEVCONF\_TEMP\_PREFERED\_LFT] = 86400, [DEVCONF\_REGEN\_MAX\_RETRY] = 3, [DEVCONF\_MAX\_DESYNC\_FACTOR] = 600, [DEVCONF\_MAX\_ADDRESSES] = 16, [DEVCONF\_FORCE\_MLD\_VERSION] = 0, [DEVCONF\_ACCEPT\_RA\_DEFRTR] = 1, [DEVCONF\_ACCEPT\_RA\_PINFO] = 1, [DEVCONF\_ACCEPT\_RA\_RTR\_PREF] = 0, [DEVCONF\_RTR\_PROBE\_INTERVAL] = 0, [DEVCONF\_ACCEPT\_RA\_RT\_INFO\_MAX\_PLEN] = 0, [DEVCONF\_PROXY\_NDP] = 0, [DEVCONF\_OPTIMISTIC\_DAD] = 0, [DEVCONF\_ACCEPT\_SOURCE\_ROUTE] = 0, [DEVCONF\_MC\_FORWARDING] = 0, [DEVCONF\_DISABLE\_IPV6] = 0, [DEVCONF\_ACCEPT\_DAD] = 1, [DEVCONF\_FORCE\_TLLAO] = 0, [DEVCONF\_NDISC\_NOTIFY] = 0, [DEVCONF\_MLDV1\_UNSOLICITED\_REPORT\_INTERVAL] = 10000, [DEVCONF\_MLDV2\_UNSOLICITED\_REPORT\_INTERVAL] = 1000, ...]], [{nla\_len=300, nla\_type=IFLA\_INET6\_STATS}, [[IPSTATS\_MIB\_NUM] = 37, [IPSTATS\_MIB\_INPKTS] = 703, [IPSTATS\_MIB\_INOCTETS] = 114914, [IPSTATS\_MIB\_INDELIVERS] = 0, [IPSTATS\_MIB\_OUTFORWDATAGRAMS] = 0, [IPSTATS\_MIB\_OUTPKTS] = 25, [IPSTATS\_MIB\_OUTOCTETS] = 1496, [IPSTATS\_MIB\_INHDRERRORS] = 0, [IPSTATS\_MIB\_INTOOBIGERRORS] = 0, [IPSTATS\_MIB\_INNOROUTES] = 0, [IPSTATS\_MIB\_INADDRERRORS] = 0, [IPSTATS\_MIB\_INUNKNOWNPROTOS] = 0, [IPSTATS\_MIB\_INTRUNCATEDPKTS] = 0, [IPSTATS\_MIB\_INDISCARDS] = 0, [IPSTATS\_MIB\_OUTDISCARDS] = 0, [IPSTATS\_MIB\_OUTNOROUTES] = 0, [IPSTATS\_MIB\_REASMTIMEOUT] = 0, [IPSTATS\_MIB\_REASMREQDS] = 0, [IPSTATS\_MIB\_REASMOKS] = 0, [IPSTATS\_MIB\_REASMFAILS] = 0, [IPSTATS\_MIB\_FRAGOKS] = 0, [IPSTATS\_MIB\_FRAGFAILS] = 0, [IPSTATS\_MIB\_FRAGCREATES] = 0, [IPSTATS\_MIB\_INMCASTPKTS] = 703, [IPSTATS\_MIB\_OUTMCASTPKTS] = 25, [IPSTATS\_MIB\_INBCASTPKTS] = 0, [IPSTATS\_MIB\_OUTBCASTPKTS] = 0, [IPSTATS\_MIB\_INMCASTOCTETS] = 114914, [IPSTATS\_MIB\_OUTMCASTOCTETS] = 1496, [IPSTATS\_MIB\_INBCASTOCTETS] = 0, [IPSTATS\_MIB\_OUTBCASTOCTETS] = 0, [IPSTATS\_MIB\_CSUMERRORS] = 0, ...]], [{nla\_len=52, nla\_type=IFLA\_INET6\_ICMP6STATS}, [[ICMP6\_MIB\_NUM] = 6, [ICMP6\_MIB\_INMSGS] = 0, [ICMP6\_MIB\_INERRORS] = 0, [ICMP6\_MIB\_OUTMSGS] = 25, [ICMP6\_MIB\_OUTERRORS] = 0, [ICMP6\_MIB\_CSUMERRORS] = 0]], [{nla\_len=20, nla\_type=IFLA\_INET6\_TOKEN}, inet\_pton(AF\_INET6, "::")], [{nla\_len=5, nla\_type=IFLA\_INET6\_ADDR\_GEN\_MODE}, IN6\_ADDR\_GEN\_MODE\_EUI64]]]]], [{nla\_len=41, nla\_type=IFLA\_PARENT\_DEV\_NAME}, "f523660e-b63b-4767-8f10-9894abca"...], [{nla\_len=10, nla\_type=IFLA\_PARENT\_DEV\_BUS\_NAME}, "vmbus"]]]], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 2740

**recvmsg(9, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{nlmsg\_len=20, nlmsg\_type=NLMSG\_DONE, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268905, nlmsg\_pid=131424}, 0], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 20**

**sendto(9, [{nlmsg\_len=20, nlmsg\_type=RTM\_GETADDR, nlmsg\_flags=NLM\_F\_REQUEST|NLM\_F\_DUMP, nlmsg\_seq=1709268906, nlmsg\_pid=0}, {ifa\_family=AF\_UNSPEC, ...}], 20, 0, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 20**

**recvmsg(9, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[[{nlmsg\_len=76, nlmsg\_type=RTM\_NEWADDR, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268906, nlmsg\_pid=131424}, {ifa\_family=AF\_INET, ifa\_prefixlen=8, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_HOST, ifa\_index=if\_nametoindex("lo")}, [[{nla\_len=8, nla\_type=IFA\_ADDRESS}, inet\_addr("127.0.0.1")], [{nla\_len=8, nla\_type=IFA\_LOCAL}, inet\_addr("127.0.0.1")], [{nla\_len=7, nla\_type=IFA\_LABEL}, "lo"], [{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT], [{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=44, tstamp=44}]]], [{nlmsg\_len=88, nlmsg\_type=RTM\_NEWADDR, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268906, nlmsg\_pid=131424}, {ifa\_family=AF\_INET, ifa\_prefixlen=20, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_UNIVERSE, ifa\_index=if\_nametoindex("eth0")}, [[{nla\_len=8, nla\_type=IFA\_ADDRESS}, inet\_addr("172.28.132.59")], [{nla\_len=8, nla\_type=IFA\_LOCAL}, inet\_addr("172.28.132.59")], [{nla\_len=8, nla\_type=IFA\_BROADCAST}, inet\_addr("172.28.143.255")], [{nla\_len=9, nla\_type=IFA\_LABEL}, "eth0"], [{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT], [{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=61, tstamp=61}]]]], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 164**

**recvmsg(9, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[[{nlmsg\_len=72, nlmsg\_type=RTM\_NEWADDR, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268906, nlmsg\_pid=131424}, {ifa\_family=AF\_INET6, ifa\_prefixlen=128, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_HOST, ifa\_index=if\_nametoindex("lo")}, [[{nla\_len=20, nla\_type=IFA\_ADDRESS}, inet\_pton(AF\_INET6, "::1")], [{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=44, tstamp=44}], [{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT]]], [{nlmsg\_len=72, nlmsg\_type=RTM\_NEWADDR, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268906, nlmsg\_pid=131424}, {ifa\_family=AF\_INET6, ifa\_prefixlen=64, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_LINK, ifa\_index=if\_nametoindex("eth0")}, [[{nla\_len=20, nla\_type=IFA\_ADDRESS}, inet\_pton(AF\_INET6, "fe80::215:5dff:fe6e:815d")], [{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=61, tstamp=61}], [{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT]]]], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 144**

**recvmsg(9, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{nlmsg\_len=20, nlmsg\_type=NLMSG\_DONE, nlmsg\_flags=NLM\_F\_MULTI, nlmsg\_seq=1709268906, nlmsg\_pid=131424}, 0], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 20**

close(9) = 0

**socket(AF\_INET, SOCK\_STREAM|SOCK\_CLOEXEC, IPPROTO\_TCP) = 9**

**setsockopt(9, SOL\_SOCKET, SO\_REUSEADDR, [1], 4) = 0**

**bind(9, {sa\_family=AF\_INET, sin\_port=htons(5555), sin\_addr=inet\_addr("127.0.0.1")}, 16) =**

**0**

listen(9, 100) = 0

getsockname(9, {sa\_family=AF\_INET, sin\_port=htons(5555), sin\_addr=inet\_addr("127.0.0.1")},

[128 =>

16]) = 0

getsockname(9, {sa\_family=AF\_INET, sin\_port=htons(5555), sin\_addr=inet\_addr("127.0.0.1")},

[128 =>

16]) = 0

getpid() = 131424

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 131424

write(8, "\1\0\0\0\0\0\0\0", 8) = 8

newfstatat(0, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x7), ...},

AT\_EMPTY\_PATH) = 0

read(0, create 5 -11

"create 5 -11\n", 1024) = 13

newfstatat(1, "", {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x7), ...},

AT\_EMPTY\_PATH) = 0

write(1, "Error: Parent not found \n", 25Error: Parent not found

) = 25

read(0, create 9 5

"create 9 5\n", 1024) = 11

write(1, "Error: Parent not found \n", 25Error: Parent not found

) = 25

read(0, create 10 5

"create 10 5\n", 1024) = 12

write(1, "Error: Parent not found \n", 25Error: Parent not found

) = 25

read(0, heartbit 2000

"heartbit 2000\n", 1024) = 14

clock\_nanosleep(CLOCK\_REALTIME, 0, {tv\_sec=2, tv\_nsec=0}, 0x7ffc1e19cbd0) = 0

write(1, "Heartbit: node -1 is fine\n", 26Heartbit: node -1 is fine

) = 26

write(1, "\n", 1

) = 1

read(0, exec 10 start

"exec 10 start\n", 1024) = 14

write(1, "Error:id Not found\n", 19Error:id Not found

) = 19

read(0, exec 10 stop

"exec 10 stop\n", 1024) = 13

write(1, "Error:id Not found\n", 19Error:id Not found

) = 19

read(0, exec 10 time

"exec 10 time\n", 1024) = 13

write(1, "Error:id Not found\n", 19Error:id Not found

) = 19

read(0, kill 10

"kill 10\n", 1024) = 8

write(1, "Error: id Not Found\n", 20Error: id Not Found

) = 20

read(0, ping 10

"ping 10\n", 1024) = 8

write(1, "Error: id not found\n", 20Error: id not found

) = 20

read(0, kill 5

"kill 5\n", 1024) = 7

write(1, "Error: id Not Found\n", 20Error: id Not Found

) = 20

read(0, "", 1024) = 0

getpid() = 131424

write(4, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 131424

getpid() = 131424

write(8, "\1\0\0\0\0\0\0\0", 8) = 8

futex(0x558e7d371388, FUTEX\_WAKE\_PRIVATE, 1) = 1

getpid() = 131424

poll([{fd=3, events=POLLIN}], 1, -1) = 1 ([{fd=3, revents=POLLIN}])

getpid() = 131424

read(3, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 131424

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

close(7) = 0

close(6) = 0

close(5) = 0

close(4) = 0

close(3) = 0

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод**

В результате проделанной работы, я научился использовать утилиту Strace, а также отслеживать с ее помощью использованные в программе системные вызовы. Этот инструмент действительно незаменим для отладки и диагностики программ.